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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/599,789	10/10/2006	Barry Mos	NL 040369	4613
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P.O. BOX 3001				
BRIARCLIFF MANOR, NY 10510				
EXAMINER				
CALEY, MICHAEL H				
ART UNIT		PAPER NUMBER		
2871				
MAIL DATE		DELIVERY MODE		
02/11/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/599,789

Applicant(s)

MOS, BARRY

Examiner

MICHAEL H. CALEY

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 October 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SI/02)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____
- Paper No(s)/Mail Date ____

DETAILED ACTION

Drawings

Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Karman et al.
(U.S. Patent Application Publication No. 2003/0025661 "Karman").

Regarding claim 1, Karman discloses a liquid crystal display device having:

a liquid crystal material (Figure 5 element 15) disposed between first and second substrates (Figure 5 elements 14 and 14'), a plurality of individually controllable picture elements (Figure 6), each picture element comprising electric field generating means

(Figure 6 elements 30, 32, 8, 9, and 10) for generating electric fields in more than one direction (Figure 5 elements 11 and 12) in order to influence the liquid crystal material in the picture element, wherein the electric field generating means comprise resistive material layer paths (Figure 6 elements 8, 9, and 10) disposed on the first substrate and substantially surrounding the area of the picture element, and at least three connection terminals (Figure 6 elements 8, 9, and 10) for feeding voltage to the resistive layer material paths.

Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Green (U.S. Patent No. 5,124,695).

Regarding claim 1, Green discloses a liquid crystal display device having:

a liquid crystal material (Column 2 line 67) disposed between first and second substrates (Column 3 lines 48-54), a plurality of individually controllable picture elements (Figure 6), each picture element comprising electric field generating means for generating electric fields in more than one direction (Figure 6 elements 24 and 25) in order to influence the liquid crystal material in the picture element, wherein the electric field generating means comprise resistive material layer paths (Figure 6 elements 24 and 25; Column 3 lines 48-50) disposed on the first substrate and substantially surrounding the area of the picture element, and at least three connection terminals (Figure 6 elements 24 and 25) for feeding voltage to the resistive layer material paths.

Regarding claim 2, Green discloses the resistive material layer paths as forming a continuous layer surrounding the area defined by the picture element (Figure 6 element 25).

Claims 1, 3, and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Yaniv et al. (U.S. Patent No. 4,589,733 "Yaniv").

Regarding claim 1, Yaniv discloses a liquid crystal display device having:

a liquid crystal material (Figure 10 element 58) disposed between first and second substrates (Figure 10 elements 98 and 116), a plurality of individually controllable picture elements (Figure 8), each picture element comprising electric field generating means (Figure 8 elements 60 and 62) for generating electric fields in more than one direction (Column 5 lines 1-16) in order to influence the liquid crystal material in the picture element, wherein the electric field generating means comprise resistive material layer paths (Figure 6 elements 60-62) disposed on the first substrate and substantially surrounding the area of the picture element, and at least three connection terminals (Figure 7 elements 80, 82, 90, and 92) for feeding voltage to the resistive layer material paths.

Regarding claim 3, Yaniv discloses the resistive material layer paths as comprising strips that form a rectangle and the picture element as comprising four connection terminals, attached to the corners of the rectangle (Figure 7).

Regarding claim 6, Yaniv discloses first and second voltages fed to connection terminals antipodal to one another (Figure 7 elements 80 and 90) and voltages between the first and second voltages fed at the third and fourth corners (Column 6 lines 32-51).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Karman in view of Kwag et al. (U.S. Patent Application Publication No. 2002/0054264 "Kwag").

Karman fails to disclose the resistive material layer paths as forming a triangle and three connections attached to the corners of the triangle. Kwag, however, teaches such a shape of the resistive material and three connections to the corners of the triangle (Figure 3 element 80).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to form the resistive layer paths to form a triangle and to form connections as proposed. One would have been motivated to form the picture element as proposed to benefit from improved viewing angle due to splayed arrangement of the liquid crystal molecules (Paragraph [0030]).

Claims 5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Karman in view of Takatori et al. (U.S. Patent Application Publication No. 2003/0025865 “Takatori”).

Regarding claim 5, Karman fails to disclose the resistive material layer paths as comprising strips forming a hexagon and the picture element as comprising three connection terminals attached to every second corner of the hexagon. Takatori, however, teaches such a hexagon shape of the resistive strips and the connection terminals as proposed (Figure 9 elements 27 and 28).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to form the resistive material layer paths and connection terminals as proposed. One would have been motivated to form the picture element as proposed to benefit from a pixel having six domains such that the viewing angle characteristic may be improved according to conventional methods (Paragraph [0307]).

Regarding claim 7, Karman discloses the liquid crystal molecules as rotating freely in a plane that is parallel to the first and second substrate (Paragraph [0024]). Karman fails to explicitly disclose an orientation layer. Takatori, however, teaches such an orientation layer.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to form an orientation layer on the display device disclosed by Takatori. One would have been motivated to form such an orientation layer to facilitate formation of multiple domains such that the viewing of the display panel can be improved from a variety of viewing angles (Paragraph [0263]).

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL H. CALEY whose telephone number is (571)272-2286. The examiner can normally be reached on M-F 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David C. Nelms can be reached on (571) 272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael H. Caley/
Primary Examiner, Art Unit 2871